DETAILED ACTION

1. Claims 1-18 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In these claims applicants mention **"...at least two matches"**, and **"..to compare said total potential token lengths;"** which is generally narrative and indefinite with the invention. Applicants do not point out clearly which options include in the present invention by these two limitations. Applicant only mentioned at least two matches, and it is surely ambiguous to understand that what are the two matches. Examiner also failed to understand what does it mean to compare said total potential token lengths. The limitations do not emphasis comparing the total potential token length with what. The examiner will interpret these terms and limitations with the regarding claims as best understood for applying the appropriate art for rejection purposes. Appropriate correction needs to overcome the rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

3. Claim 12, and 18 is rejected under 35 U.S.C. 101 because the claim invention is directed to non-statutory subject matter. According to the specification of the invention **"A computer program product, tangibly embodied in a computer-readable medium, comprising software code to perform, when the program element is executed by data processor" and "A computer program embodied on a computer readable medium"** is reasonably interpreted by one of ordinary skill as just software, it is a system of software, per se. In this claim the function of the program is just software not any hardware. Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. Similarly, computer programs claimed as computer instructions per se, i.e., the

descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. So, it does not appear that a claim reciting software with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al hereafter Clark (US patent 5778255) in view of Winters et al hereafter Winters (US Patent 5532693).

5. As per claim 1, Clark discloses an apparatus comprising: a first storage component operable to store a history buffer for containing an unencoded version of at least one previously encoded string (col. 1, lines 49-67); a second storage component

operable to store: an indicator that there exist at least two matches found by said first comparison component, and tokens corresponding to said at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); a summing component operable to sum potential token lengths to provide total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); a second comparison component operable to compare said total potential token lengths (col. 9, 17-32); a selection component operable to select a match corresponding to a shortest total token length to represent said string from said input data stream; and an emitting component for emitting tokens representing said match corresponding to a shortest total token length (col. 11, lines 5-35). He does not expressly disclose a first comparison component operable to compare a string from said input data stream with said unencoded version of said at least one previously encoded string. However, in the same field of endeavor, Winters discloses a first comparison component operable to compare a string from said input data stream with said unencoded version of said at least one previously encoded string (col. 2, lines 10-27, col. 3, lines 42-58). Accordingly, it would been obvious to one of ordinary skill in the network security art at the time of invention was made to have incorporated Winters's teachings of method and apparatus for comparing the input data with previous data with the teachings of Clark, for the purpose of suitably using the data parsing with the history buffer after compare the input data (col. 2, lines 10-27, col. 3, lines 42-58).

6. As per claim 2, Clark discloses an apparatus, wherein said apparatus comprises a data compression apparatus (col. 11, 5-35).

7. As per claim 3, Clark discloses an apparatus, wherein said apparatus comprises an adaptive dictionary based data compression apparatus (col. 6, lines 53-67, col. 13, lines 26-59).

8. As per claim 4, Clark discloses an apparatus, wherein said apparatus comprises a Lempel-Ziv data compression apparatus (col. 14, lines 45-59).

9. As per claim 5, Clark discloses an apparatus, wherein said apparatus comprises a data encryption apparatus (col. 11, 5-35).

10. As per claim 6, Clark discloses an apparatus, wherein said apparatus comprises a message digest generation apparatus (col. 49-67).

11. As per claim 7, Clark discloses a method comprising: storing a history buffer for containing an unencoded version of at least one previously encoded string (col. 1, lines 49-67); storing: an indicator that there exist at least two matches found by said first comparison component, and tokens corresponding to said at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); summing potential token lengths to provide total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); comparing said total potential token lengths (col. 9, 17-32); selecting a match corresponding to a shortest total token length to represent said string from said input data stream; and emitting tokens representing said match corresponding to a shortest total token length (col. 11, lines 5-35). He does not expressly disclose comparing a string from said input data stream with said unencoded version of said at least one previously encoded string. However, in the same field of endeavor, Winters discloses comparing a string from said input data stream with said unencoded version of said at least one previously encoded

string (col. 2, lines 10-27, col. 3, lines 42-58).

The same motivation that was utilized in the combination of claim 1 applies equally as well to claim 7.

12. As per claim 8, Clark discloses a method wherein said tokens comprise compressed data corresponding to said at least two matches (col. 14, lines 45-59).

13. As per claim 9, Clark discloses a method wherein said compressed data comprises adaptive dictionary based compressed data (col. 11, lines 5-35).

14. As per claim 10, Clark discloses a method wherein said tokens comprise encrypted data corresponding to said at least two matches (col. 6, lines 53-67, col. 13, lines 26-59).

15. As per claim 11, Clark discloses a method wherein said tokens comprise message digest data corresponding to said at least two matches (col. 9, 17-32).

16. As per claim 12, and 13 Clark discloses a computer program product, and a memory the steps of: storing a history buffer for containing an unencoded version of at least one previously encoded string (col. 1, lines 49-67); storing: an indicator that there exist at least two matches found by said first comparison component, and tokens corresponding to said at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); summing potential token lengths to provide total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); comparing said total potential token lengths (col. 9, 17-32), selecting a match corresponding to a shortest total token length to represent said string from said input data stream; and emitting tokens representing said match corresponding to a shortest total token length (col. 11, lines 5-35). He does not expressly disclose

comparing a string from said input data stream with said unencoded version of said at least one previously encoded string. However, in the same field of endeavor, Winters discloses comparing a string from said input data stream with said unencoded version of said at least one previously encoded string (col. 2, lines 10-27, col. 3, lines 42-58). The same motivation that was utilized in the combination of claim 1 applies equally as well to claim 12, and 13.

17. As per claim 14, Clark discloses a parser comprising: means for storing a history buffer having a content comprising an unencoded version of at least one previously encoded string (col. 1, lines 49-67); said comparing means having an output coupled to said storing means for storing: (a) a flag for indicating that there exist at least two matches found by said comparing means and (b) tokens corresponding to said at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); means for summing potential token lengths to output total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); means coupled to said summing means for selecting a shortest total token length to represent said string from said input data stream and having an output coupled to said parser output for outputting a corresponding token (col. 11, lines 5-35). He does not expressly disclose means, having a first input coupled to said parser input and a second input coupled to said storing means, for comparing a string received from said input data stream with said history buffer content. However, in the same field of endeavor, Winters discloses means, having a first input coupled to said parser input and a second input coupled to said storing means, for comparing a string received from said input data stream with said history buffer content (col. 2, lines 10-27, col. 3, lines 42-58).

The same motivation that was utilized in the combination of claim 1 applies equally as well to claim 14.

18. As per claim 15, Clark discloses a parser comprising data compression means based on an adaptive dictionary (col. 6, lines 53-67, col. 13, lines 26-59).

19. As per claim 16, Clark discloses a parser where said data compression means comprises Lempel-Ziv data compression means (col. 14, lines 45-59).

20. As per claim 17, Clark discloses a method comprising: storing an unencoded version of at least one previously encoded string (col. 1, lines 49-67); to determine a ease where there exist at least two matches and determining tokens corresponding to the at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); summing potential token lengths to output total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); and outputting a token having a shortest total token length to represent the string from the input data stream (col. 11, lines 5-35). He does not expressly disclose comparing a string received from the input data stream with the stored unencoded version of at least one previously encoded string. However, in the same field of endeavor, Winters discloses comparing a string received from the input data stream with the stored unencoded version of at least one previously encoded string (col. 2, lines 10-27, col. 3, lines 42-58).
The same motivation that was utilized in the combination of claim 1 applies equally as well to claim 17.

21. As per claim 18, Clark discloses a computer program embodied on a computer readable medium which causes the computer to store an unencoded version of at least one previously encoded string (col. 1, lines 49-67); to determine a case where there exist at least two matches; to determine tokens corresponding to the at least two matches (col. 6, lines 53-67, col. 13, lines 26-59); to sum potential token lengths to output total potential token lengths (col. 2, lines 32-42, col. 7, lines 32-43); and to output a token having a shortest total token length to represent the string from the input data stream (col. 11, lines 5-35). He does not expressly disclose to compare a string received from the input data stream with the stored unencoded version of at least one previously encoded string. However, in the same field of endeavor, Winters discloses to compare a string received from the input data stream with the stored unencoded version of at least one previously encoded string (col. 2, lines 10-27, col. 3, lines 42-58).
The same motivation that was utilized in the combination of claim 1 applies equally as well to claim 18.

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad w. Reza whose telephone number is 571-272-6590. The examiner can normally be reached on M-F (9:00-5:00).
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOAZZAMI NASSER G can be reached on (571)272-4195. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Nasser G Moazzami/ Mohammad Wasim Reza

Supervisory Patent Examiner, Art Unit 2136 AU 2136